

Appl. No. : 09/843,025
Filed : April 25, 2001

AMENDMENTS TO THE CLAIMS

Please cancel Claims 1 and 4 without prejudice, as indicated below.

Please amend Claims 2, 5, 11, 21, and 24, as indicated below.

A complete listing of all claims is presented below with insertions underlined (e.g., insertion), and deletions struckthrough or in double brackets (e.g., ~~deletion~~ or [[~~deletion~~]]):

1. (Cancelled)
2. (Currently Amended) A method of fabricating a module for at least partially intercepting a light beam propagating along a beam path, the method comprising:
providing a single crystal silicon substrate with a first substrate surface and a second substrate surface~~The method of Claim 1, wherein~~ the first substrate surface has a {110} crystallographic orientation;
forming a reflector support layer on the first substrate surface;
forming a support frame and at least one reflector by etching the substrate from the second substrate surface;
forming at least one electrical conduit on the reflector support layer; and
forming a reflector support by etching the reflector support layer from the first substrate surface, the reflector support mechanically coupled to the support frame and the reflector, the reflector support movable such that the reflector is movable substantially perpendicularly to the first substrate surface.
3. (Cancelled)
4. (Cancelled)
5. (Currently Amended) A method of fabricating a module for at least partially intercepting a light beam propagating along a beam path, the method comprising:
providing a single crystal silicon substrate with a first substrate surface and a second substrate surface;
forming a reflector support layer on the first substrate surface~~The method of Claim 1, wherein forming a reflector support layer on the first substrate surface comprises:~~
forming a silicon dioxide layer on the first substrate surface; and
forming a substratum layer on the silicon dioxide layer;

forming a support frame and at least one reflector by etching the substrate from the second substrate surface;

forming at least one electrical conduit on the reflector support layer; and

forming a reflector support by etching the reflector support layer from the first substrate surface, the reflector support mechanically coupled to the support frame and the reflector, the reflector support movable such that the reflector is movable substantially perpendicularly to the first substrate surface.

6. (Cancelled)

7. (Cancelled)

8. (Original) The method of Claim 5, wherein forming a substratum layer comprises forming a protective layer on the silicon dioxide layer and forming a polycrystalline silicon layer on the protective layer.

9. (Original) The method of Claim 8, wherein the protective layer comprises silicon nitride.

10. (Cancelled)

11. (Currently Amended) A method of fabricating a module for at least partially intercepting a light beam propagating along a beam path, the method comprising:

providing a single crystal silicon substrate with a first substrate surface and a second substrate surface;

forming a reflector support layer on the first substrate surface;

forming a support frame and at least one reflector by etching the substrate from the second substrate surface~~The method of Claim 1, wherein forming a support frame and at least one reflector by etching the substrate from the second substrate surface comprises:~~

forming an etch-resistant layer on the second substrate surface;

patterned the etch-resistant layer on the second substrate surface to selectively expose a first region of the second substrate surface and to maintain the etch-resistant layer on a second region of the second substrate surface;

etching the substrate from the first region of the second substrate surface to the reflector support layer, thereby forming sidewalls of the support frame and at least one reflective surface of the reflector; and

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removing the etch-resistant layer from the second region of the second substrate surface;

forming at least one electrical conduit on the reflector support layer; and

forming a reflector support by etching the reflector support layer from the first substrate surface, the reflector support mechanically coupled to the support frame and the reflector, the reflector support movable such that the reflector is movable substantially perpendicularly to the first substrate surface.

12. (Original) The method of Claim 11, wherein etching the substrate from the first region of the second substrate surface comprises performing a deep reactive ion etch.

13. (Original) The method of Claim 12, wherein etching the substrate from the first region of the second substrate surface further comprises performing an anisotropic wet etch subsequently to the deep reactive ion etch.

14. (Original) The method of Claim 11, wherein the etch-resistant layer comprises silicon dioxide.

15. (Original) The method of Claim 11, wherein the reflector support layer comprises a silicon dioxide layer on the first substrate surface and a substratum layer on the silicon dioxide layer, and wherein forming a support frame and at least one reflector further comprises removing the silicon dioxide layer from a portion of the reflector support layer corresponding to the first region of the substrate.

16.-20. (Cancelled)

21. (Currently Amended) A method of fabricating a module for at least partially intercepting a light beam propagating along a beam path, the method comprising:

providing a single crystal silicon substrate with a first substrate surface and a second substrate surface;

forming a reflector support layer on the first substrate surface;

forming a support frame and at least one reflector by etching the substrate from the second substrate surface;

forming at least one electrical conduit on the reflector support layer The method of Claim †, wherein forming at least one electrical conduit on the reflector support layer comprises:

forming a first metallic layer on the reflector support layer;

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 patterning the first metallic layer, thereby forming a first portion of the electrical conduit;

 forming an insulating layer on the first metallic layer;

 patterning the insulating layer, thereby forming at least one via holes to the first portion of the electrical conduit;

 forming a second metallic layer on the insulating layer;

 patterning the second metallic layer, thereby forming a second portion of the electrical conduit, the second portion of the electrical conduit being conductively coupled to the first portion of the electrical conduit through the via holes of the insulating layer; and

forming a reflector support by etching the reflector support layer from the first substrate surface, the reflector support mechanically coupled to the support frame and the reflector, the reflector support movable such that the reflector is movable substantially perpendicularly to the first substrate surface.

22. (Original) The method of Claim 21, wherein the first metallic layer and second metallic layer each comprise a chromium layer and a gold layer.

23. (Original) The method of Claim 21, wherein the insulating layer comprises silicon dioxide.

24. (Currently Amended) The method of Claim [[1]]21, wherein the first portion and second portion of the electrical conduit each have a generally spiral configuration.

25.-37. (Cancelled)